

- 21 -

## CLAIMS

1. Optical fiber cable (1) comprising:
  - a central strength member (2);
  - a number of tubes (3) containing optical fibers (4); and
  - 5 - a protective outer jacket (6);characterized in that
  - the filling coefficient of optical fibers in at least one loose tube is  $\geq 45\%$ ;
  - the tubes (3) comprise a material having an elasticity modulus  $\geq 700$  MPa; and
  - 10 - the optical fibers (4) have a microbending sensitivity  $\leq 4,0 \text{ dB} \cdot \text{km}^{-1} / \text{g} \cdot \text{mm}^{-1}$  in a temperature range from about  $-30^\circ\text{C}$  to  $+60^\circ\text{C}$  at about  $1550 \text{ nm}$ .
- 15 2. Optical fiber cable (1) according to claim 1, wherein the optical fibers (4) are single mode, SM, or single mode reduced, SM-R, fibers.
3. Optical fiber cable (1) according to claim 1 or 2, wherein the tubes (3) comprise a material having an elasticity modulus  $\geq 800$  MPa.
4. Optical fiber cable (1) according to claim 1 or 2, wherein the tubes (3) comprise a material having an elasticity modulus  $\geq 1000$  MPa.
- 20 5. Optical fiber cable (1) according to any of claims 1-4, wherein the optical fibers (4) comprise an inner coating layer (4P) of a material having an elastic modulus lower than about  $200 \text{ MPa}$  when measured at  $-30^\circ\text{C}$  and lower than about  $2 \text{ MPa}$  when measured at a temperature from about  $+20^\circ\text{C}$  to  $+60^\circ\text{C}$ .
- 25 6. Optical fiber cable (1) according to claim 5, wherein the optical fibers (4) comprise an inner coating layer (4P) of a material having an elastic modulus lower than about  $80 \text{ MPa}$  when measured at about  $-30^\circ\text{C}$ .

BEST AVAILABLE COPY

- 22 -

7. Optical fiber cable (1) according to claim 5, wherein the optical fibers (4) comprise an inner coating layer (4P) of a material having an elastic modulus between about 20 and 60 MPa when measured at about  $-30^{\circ}\text{C}$ .
- 5 8. Optical fiber cable (1) according to any of claims 1-7, wherein the optical fibers (4) comprise a mass colored outer coating layer (4S).
9. Optical fiber cable (1) according to any of claims 1-8, wherein the filling coefficient of optical fibers in at least one loose tube is  $\geq 50\%$ .
- 10 10. Optical fiber cable (1) according to any of claims 1-9, wherein the tubes (3) are made of a material selected from the group consisting of: polybutyleneterephthalate, high density polythene, medium density polythene and low density polythene.
11. Optical fiber cable (1) according to any of claims 1-10, wherein the tubes (3) have an inner diameter  $\leq$  about 1,25 mm.
- 15 12. Optical fiber cable (1) according to any of claims 1-10, wherein the tubes (3) have an inner diameter  $\leq$  about 1,20 mm.
13. Optical fiber cable (1) according to any of claims 1-12, wherein the outer diameter of colored optical fibers is about 0,245 mm.
14. Optical fiber cable (1) according to any of claims 1-13, wherein the external cable diameter is  $\leq$  about 7,0 mm with a number of optical fibers  $\geq 72$ .
- 20 15. Optical fiber cable (1) according to any of claims 1-13, wherein the external cable diameter is  $\leq$  about 6,0 mm with a number of optical fibers  $\geq 72$ .
- 25 16. Optical fiber cable (1) according to any of claims 1-15, wherein the outer jacket (6) is made of a material selected from the group consisting of: Polyamide 12, high density polythene, medium density polythene and low density polythene.

BEST AVAILABLE COPY

- 23 -

17. Optical fiber cable (1) according to any of claims 1-15, wherein the outer jacket (6) is made of a graphite-charged Polyamide 12 compound.

BEST AVAILABLE COPY